

REMARKS

In the Office Action dated October 18, 2001, claims 1, 5, 6, and 7 are rejected under 35 USC §102(b). Claims 2-4 are rejected under 35 USC §103(a). Claims 1-7 are rejected under the doctrine of obviousness-type double patenting.

By this Communication, claims 1, 6 and 7 have been amended. New claims 8, 9, 10, 11, and 12 have been added to claim Applicant's invention in a different form. For the reasons set forth hereafter, it is respectfully submitted that Applicant's invention includes features which are not anticipated by the cited references, taken singly or in any permissible combination. Reconsideration, is, therefore, respectfully requested.

Claims 1 and 7 are rejected under 35 USC 102(b) as being anticipated by Lo.

Lo discloses a billiard cue having a shaft formed of a shell of carbon fiber filled with a core of urethane foam. However, Lo lacks any teaching of forming a bore extending from a tip end of a shaft. Rather, Lo teaches away from any bore in the tip end of the shaft which would function to reduce the tip mass of the cue to minimize cue ball deflection upon impact between the cue and a billiard or pool ball. The solid front connector 20 of carbon fiber adhered to the striking tip and including a stem which is inserted in the front end portion of the shaft of Lo adds weight to the tip end.

Since Lo is devoid of any teaching of a bore extending from the tip end of a shaft as set forth by the Applicant in claims 1 and 7, it is respectfully submitted that Applicant's invention as set forth in claims 1 and 7 patentably defines over Lo and is not anticipated or even rendered obvious by Lo.

Claims 5 and 6 are rejected under 35 USC §102(b) as being anticipated by Barrows.

Barrows likewise lacks any bore extending from the tip end of the shaft for a predetermined distance along the length of the shaft to reduce the mass of the tip end to minimize cue ball deflection on impact with the cue. Barrows provides a shoulder plug inserted at the tip end of the shaft which makes a practically solid inside rod to the tube as in an ordinary wood cue. Thus, while Barrows has a bore

extending along a portion of the shaft, the bore cannot be said to extend from the tip end so as to reduce the mass of the tip end as Applicant's bore as set forth in claim 1, from which claims 5 and 6 depend.

Thus, by dependancy, and for the reasons set forth above, it is respectfully submitted that Applicant's invention as set forth in claims 5 and 6 patentably defines over Barrows and is not anticipated or even rendered obvious by Barrows.

New claims 8, 9, 10, 11, and 12 depend from claim 1 and, for the same reasons set forth above with respect to the patentability of claim 1 and the claims depending therefrom over Lo or Barrows, it is respectfully submitted that Applicant's invention as set forth in new claims 8-12 likewise patentably defines over Lo and Barrows.

Claims 2-4 are rejected under 35 USC §103(a) as being unpatentable over Lo. The Examiner contends that Lo discloses the claimed device with the exception of wall thickness. The Examiner further states "However, absence some showing of unexpected results, the exact thickness of Lo's wall would obviously have been up to the ordinary skilled artisan depending on the strength and weight characteristics desired by the player".

As explained above, Lo lacks any teaching of a bore extending from the tip end for a predetermined distance which functions to minimize the mass of the tip end to minimize cue ball deflection upon impact with the cue. Thus, contrary to what the Examiner states in the Office Action, Lo does not disclose the claimed device.

Further with respect to the Examiner's contention that some showing of unexpected results must be present, it is respectfully submitted that Applicant clearly defines in the specification the reason for the wall thickness, i.e., on page 5, lines 9-12. This wall thickness, in conjunction with the bore extending from the tip end combined to form a cue shaft having the requisite strength for normal use while at the same time providing the benefit of minimized cue ball deflection upon impact with the cue. Such minimized cue ball deflection resulting from reduced tip mass is not present in any of the cited references. Thus, this result clearly is one not

anticipated or rendered obvious by the cited references, taken singly or in any combination.

For these reasons, it is respectfully submitted that Applicant's invention as set forth in claims 2-4, in addition to the dependency of claims 2-4 from claim 1, patentably define over the cited reference and are not rendered obvious by Lo.

New claims 8, 9 and 10 are added in dependency of other claims and repeat the subject matter of certain other claims in the application so as to define Applicant's invention in a different combination of elements.

For the same reasons set forth above with respect to the patentability of claims 1 and 3 from which claims 8, 9 and 10 separately depend, it is respectfully submitted that Applicant's invention set forth in claims 8, 9 and 10 includes features which are not anticipated or rendered obvious for the reasons posed by the Examiner.

New claim 11 is submitted to patentably define over Lo and Barrows since Lo and Barrows lack any tip portion of a shaft having a bore extending only through the tip portion. As described above, both Lo and Barrows are devoid of any teaching or suggestion of employing a bore extending from a tip end and through a tip portion of a shaft which reduces the mass of the tip end of the shaft to minimize cue ball deflection on impact with the cue.

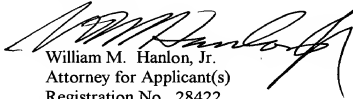
Claim 12 is submitted to patentably define over the references since, although Lo shows a polyurethane foam housed within the bore of the shaft or shell, Lo is devoid of any teaching of a bore extending from the tip end of the shaft which would function to reduce the mass of the tip end of the shaft. Thus, it is submitted that Applicant's invention as set forth in claim 12, which fills the bore with a lightweight, non-structural material, does not detract from the reduced tip end mass, and patentably defines over the cited references taken in any permissible manner.

Claims 1-7 are rejected under the doctrine of obviousness-type double patenting. Although Applicant submits that the claims in the present invention are patentably distinct from claims 1-9 of cited US Patent No. 6,110,051, Applicant agrees to file a Terminal Disclaimer upon receiving an indication of allowable subject matter in this application.

In summary, for the reasons set forth above, it is respectfully submitted that Applicant's invention as set forth in claims 1-12 includes features which are not anticipated by the cited references, taken singly or in any permissible combination. Thus, it is submitted that claims 1-12 are in condition for allowance; a notice of which is respectfully requested.

Respectfully submitted,

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